### KAPAS, Lasslo

Organisational questions of purchasing agricultural products by the government (supplying the industry with raw materials) after the socialist transformation of agriculture. Elelm ipar 16 no.10:310-314 0 '62.

1. Elelmezesugyi Minisaterium, es "Elelmezesi Ipar" szerkesato bisottsagi tagja.

# KAPAS, Laszlo

Role of fodder mixture exchange in the fodder economy. Elelm ipar 19 no.2:43-47 F '65.

1. Institute of Food Industry "conomics and Organization, Budapest, and Editorial Board Member, "Elelmezesi Ipar."

### KAPAS, Laszlo

Long-range scientific research plan for raw material supply. Elelm ipar 17 no.8:257-262 Ag '63.

1. Elelmiszeripari Ipargazdasagi es Uzemszervezesi Intezet; "Elelmezesi Ipar" szerkeszto bizottsagi tagja.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420013-4"

# KAPAS, Lasslo

Results in the long-range scientific research on raw material supply. Elelm ipar 18 no.10:307-311 0 '64.

1. Institute of Food Industry Economics and Organization, Budapest.

# KAPAS, Vagdolna; MARFAI, Arpad

Some problems relating to the private constructions and private small-scale construction industry. Stat szemle 40 no.12:1224-1239 D \*162.

Kosponti Statisstikai Hivatal foeloadoja (for Kapas).
 Kosponti Statisstikai Hivatal osztalyvesetochelyettese (for Marfai).

KAPAS, C., Gati, J.

Grooving pipe rolls with a constant inner diameter and external diameter variable per section. p. 170. (KOTASZATT LAPOK. Vol. 12, no. h/5, Apr/May 1957, Budapest, Hungary)

SO: Monthly List of East European Accessions (EMAL) LC. /ol. 6, no. 12, Dec. 1957. Uncl.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420013-4"

GATI, Jeno, kohomernok; KAPAS, Otto, gepeszmernok

Groeving of Groving of rolls for pipes with constant internal
and with sectionally variable external diameter. Koh lap 12
no. 4/5:170-175 Ap-My '57.

COUNTRY

8 BUNGAHY

CATEGORY

; Cultivated Plants. Forage Plants.

h

ABS. JOUR. : RZhB1ol., No. 23 195.8. No. 104737

AUTHOR

: Kapas, S., Keleman, I.

INST.

\* Additional and the state of t

TITLE

: Variety Trials of Corn for Silage.

ORIG. FUB. : Mngyar mezogazd., 1958, 13. No. 6, 6-7

ABSTRACT

: No abstract.

Cerd: 1/1

76

KAPATSIN, G.

APPROVED FOR RELEASE: 06/13/2000 ... CIA-BDR86-00513R000520420013 (MIRA 16:11)

l. Zemestitel sachal nika Otdela reguliresaniya ulichmogo dvisheniya i Goodare troung artomebil'noy inspektsii pe g. Meskve Ispelmitel'mege komiteta Moskovskogo gorodskego seveta deputatov trudyashchikheya.

KAFATSINA, V., doktor, laureat Gosudarstvennov premii; DZHURZHY, T.

[Shoorshiv, T], doktor.

Use of percents in veterinary modicine. Veterinariia 36 no.5;
h1-45 ky 159.

(MI-5 12:7)

1. Veterinaryy voyennyy fospital', Bukharest.

(Aerosols) (Veterinary pedicine)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420013-4"

KAPATSIISKAYA, A. A.

25854. KAPATSINSKAYA, A. A. Metody vyvodeniya novay porody ovets v Gor'kovskoy oblasti. Sov. zootekhniya, 1949, No. 4, S. 63-69.

So. Letopis' Zhurnal'nykh Statey, Vol. 34, Moskva, 1949

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420013-4"

KAFATSIASKAYA, A. A.

"Gorkiy Reat and Woll Froducing sheep and Methods of Exploiting Them." Dr Agr Sci, All-Union Sci-Res Inst of Animal Husbandry, Gor'kiy, 1954. (RZhEIcl, No 1, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (13) SO: Sum, No. 598, 29 Jul 55

KAPATSINSKAYA, A.A.

14-57-6-12982

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 6,

p 166 (USSR)

AUTHOR:

Kapatsinskaya, A. A.

TITLE:

Mutton and Fleece Production in the Collective Farms of the Gor'kovskaya Oblast' (Myasosherstnoye ovtse-

vodstvo v kolkhozakh Gor'kovskoy oblasti)

PERIODICAL:

Ovtsevodstvo, 1956, Nr 8, pp 15-20

ABSTRACT:

The collective farms of the Gor'khovskaya oblast have

been experimenting in breeding their Gor'kovskiy

mutton and fleece strain which was developed by crossing the local thick-fleeced variety with Hampshire

sheep.

Card 1/1

KAPATSINSKAYA, Antonina Aleksandrovna, prof.; TARASOVA, K.A., red.; NEM-CHERRO, b.I., tekhn. red.

[Sheep farming in Gorkiy Province] Ovtsevodstvo Gor'kovskoi oblasti. Gor'kii, Gor'kovskoe knishnoe izd-vo, 1960. 174 p.

(MIRA 14:7)

(Gorkiy Province—Sheep)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420013-4"

TOPEN THE PROPERTY OF THE PROP

KAPATSINSKAYA, L.A.; SYROMYATHIKOV, M.G.

Use of ion exchanging resins in the radiochemical analysis of natural objects. Report no.1: Concentration and separation of natural radioactive elements using the KU-2 cationite. Vest. AW Kasakh. SER 14 no.4:60-66 Ap 158. (MIRA 11:6) (Radioactive substances) (Ion exchange)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420013-4"

THE PERSON OF THE PERSON PROPERTY.

SYROMYATNIKOV, N.G.; EYRISH, M.V.; MUKASHEV, F.A.; KAPATSINSKAYA, L.A.; DEMENT'YEV, V.S.

Determination of the isotopic composition of thorium in natural formations. Radiokhimiia 5 no.2:164-170 '63. (MIRA 16:10)

STROMYATHIKOV, N.G.; KAPATSINSKAYA, L.A.

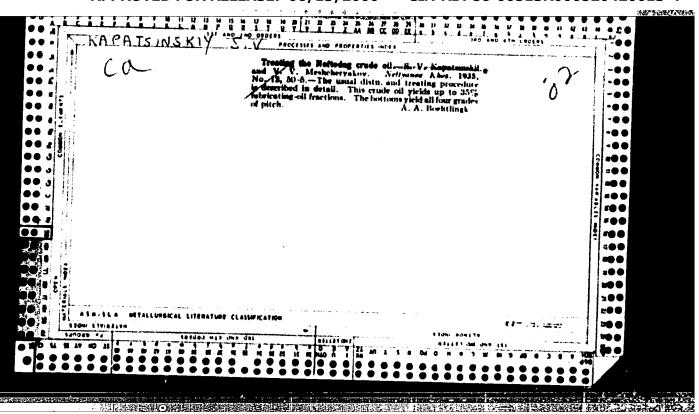
Thorium content of underground water. Vest.AN Kasakh, SSR 16 no.1:83-84 Ja '60. (Marer, Underground) (Thorium)

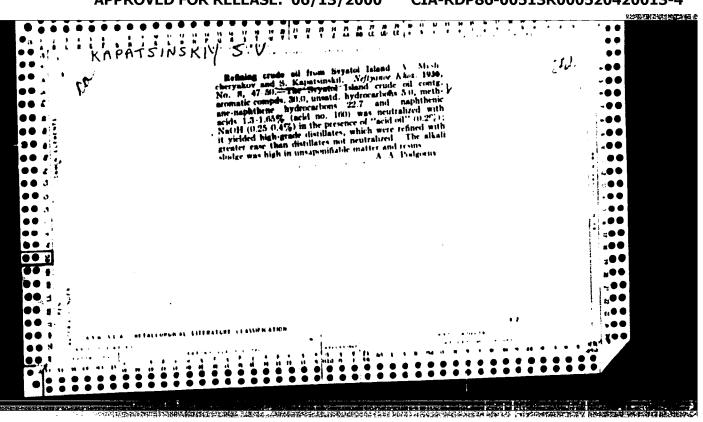
(Thorium)

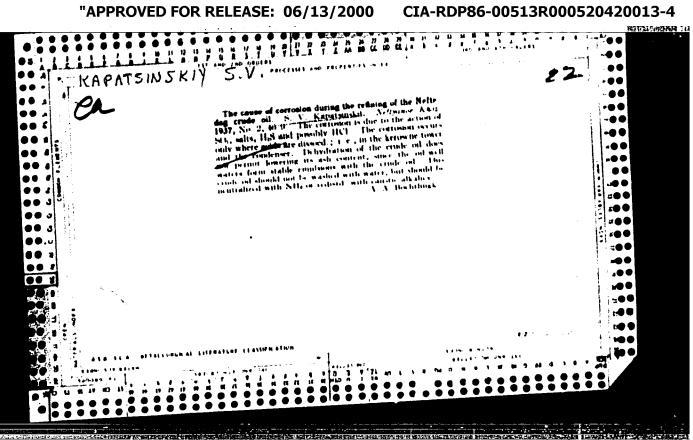
SYROMYATNIKOV, N.G.; MUKASHEV, F.A.; KAPATSINSKAYA, L.A.

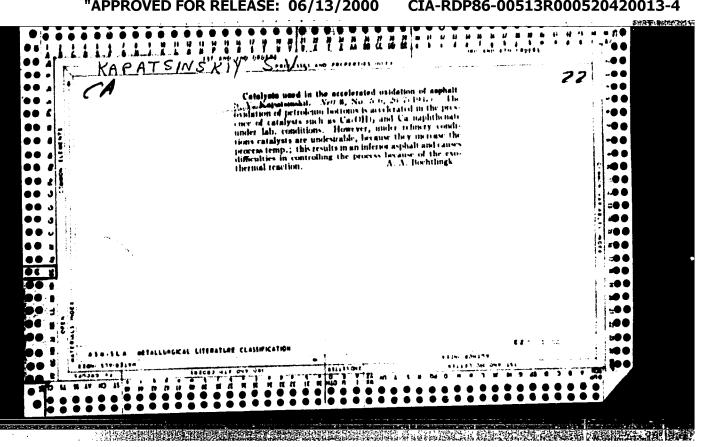
Determination of  $MsTh_1$  by measuring  $\beta$ -radiations of  $MsTh_2$  in a radium preparation from which foreign radioelements were removed. Radiokhimiia 5 no.3:356-360 \*63. (MIRA 16:10)

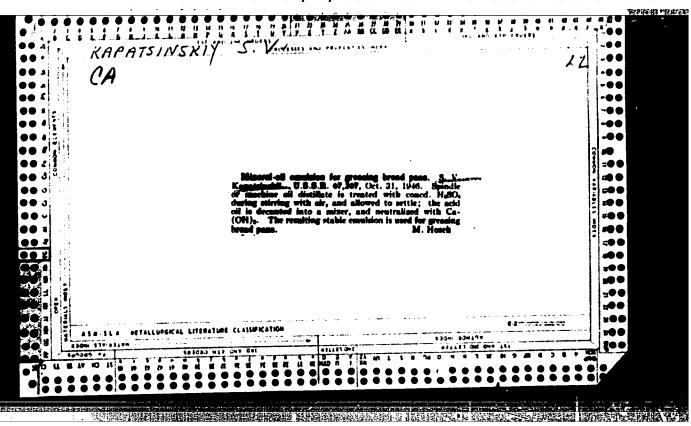
(Radium isotopes—Analysis) (Actinium isotopes—Analysis) (Beta rays)











KAPATSINSKIY, S.V.; LIPKIND, B.A.; KOZLOVA, T.Yo.; MALINA, A.S.

Crimean bentonites as raw materials for the production of oil purification cracking catalysts and adsorbents. Bent. glimy Ukr. no.3:89-98 \*59. (MIRA 12:12)

1. Gor'kovskaya opytnaya basa Vsesquusnogo nauchno-issledovatel'skego instituta po pererabotke mefti i gasa i polucheniyu iskusstvennogo shidkego tepliva. (Crimea-Bentenite) (Catalysts) (Adsorbents)

PHASE I BOOK EXPLOITATION

SOV/6246

128

Soveshchaniye po tecolitam. 1st, Leningrad, 1961.

Sinteticheskiye tseolity; polucheniye, issledovaniye i primeneniye (Synthetic Zeolites: Production, Investigation, and Use). Moscow, Isd-vo AN SSSR, 1962. 286 p. (Series: Its: Doklady) Errata slip inserted. 2500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye khimicheekikh nauk. Komisiya po tseolitam.

Reep. His.: N. M. Dubinin, Academician and V. V. Serpinskiy, Doctor of Chemical-Sciences; Ed.: Ye. G. Zhukovskaya; Tech. Ed.: S. P. Golub'.

PURPOSE: This book is intended for scientists and engineers engaged. in the production of synthetic scolites (molecular sieves), and for chemists in general.

Card 1/1/3

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420013-4"

Synthetic Zeolites: (Cont.)

Sov/6246

COVERAGE: The book is a collection of reports presented at the First
Conference on Zeolites, held in Leningrad 16 through 19 March 1961
at the Leningrad Technological Institute imeni Lensovet, and is
purportedly the first monograph on this subject. The reports are
grouped into 3 subject areas: 1) theoretical problems of adsorpgation, 2) the production of seolites and methods for their investizeolites. No personalities are mentioned. References follow individual articles.

TABLE OF CONTENTS:

Foreword

3
Dubinin, N. M. Introduction
5

Gard 2/20/3

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Synthetia Zeolites: (Cont.)	807/6246	
Belotserkovakiy, G. M., K. G. Ione, and T. G. Plachend Production of Granular Synthetic Zeolites and Study of Their Porous Structure	174	
Plachenov, T. G., G. M. Belotserkovskiy, V. F., Karel'skays, A. A. Lipkind, and L. I. Pigusova. Investition of the Secondary Porous Structure of Synthetic Seclites and Their Drying Properties		
A. T. Slepneva. Granulation of a Synthetic Zeolite Decident	191	:
Kanavets, P. I., A. E. Sporius, P. N. Helent'yev, A. Maxum, O. A. Bokuehava, V. I. Chernykh, and L. B. Khandros. Production of Strong Spherical Granules Crystalline Scolite Powders	I. of 195	
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	unicianna que a prepara e e e e e e e e e e e e e e e e e e	
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YEVDOKIMOV, \.G.; KALABIN, M.M.; KAPATSKIY, N.A., kand. fiz.-matem.nauk, otv. red.; LEBEDEVA, I.A., red.

[Physics; textbook for students entering the Leningrad Institute of Construction Engineers] Fizika; uchebnoe posobie dlia postupaiushchikh v LISI; Leningrad, Inzhenernostroite. in-t, 1963. 154 p. (MIRA 17:4)

# KAPCHENKO, L.N.

Natural synthesis of crustal hydrocarbons. Trudy VNIGRI no.212. Geokhim.sbor. no.8:41-56 '63.

"Petroleum drops" in mineral crystals. Ibid.:57-65 '63. (MIRA 16:12)

AND THE PROPERTY OF PERSONS ASSESSED TO SERVICE AND ASSESSED ASSES

### KAPCHENKO, L.N.

Hypothesis concerning the concentration of sedimentary-cover abyssal caused by the removal of water molecules from solutions. Lit. i pol. iskop. no.2:134-140 Mr-Ap \*65. (MIRA 18:6)

1. Vsesoyuznyy neftyanoy nauchno-issledovatel'skiy geologorazvedochnyy institut, Leningrad.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420013-4"

# KAPCHENKO, L.N. Genesis of internal chloride brines in the Siberian Platform. Geokhimia no.11:1182-1192 N \*(4. (MIRA 18:8) 1. All-Union Scientific Research Institute for Geological Petroleum Prospecting, Leningrad.

· Control Cont	<del>-</del>
ACC NAT AT6000194 SOURCE CODE: UR/3158/66/000/036/0001/	0010
AUTHOR: Kapchigashev, S. P.; Popov, Yu. P.	52
ORG: none	
TITLE: Determination of level densities and the "a" parameter from dat averaged [neutron] capture cross-sections	a on
SOURCE: Obninsk. Fiziko-energeticheskiy institut. Doklady, FEI-36, 1 Opredeleniye plotnostey urovney i parametra "a" dannykh po usrednennym secheniyam zakhvata, 1-10	966. m
TOPIC TAGS: neutron capture, Fermi level, level density, neutron, racapture, radiation neutron capture, radiation width, resonance, nucleon plasma density	diation state,
ABSTRACT: Cross-sections of radiation capture of neutrons with energy 50 keV, averaged for several resonances, are analyzed to obtain the parameter $f_{\mathcal{F}_{2,2}}$ . On the basis of radiation widths obtained for the parameter measured for different resonances, level densities are computed for nucleon $f_{\mathcal{F}_{2,2}}$ and values are obtained for the parameter $f_{\mathcal{F}_{2,2}}$ and values are obtained for the parameter $f_{\mathcal{F}_{2,2}}$ which represents the second $f_{\mathcal{F}_{2,2}}$ and $f_{\mathcal{F}_{2,2}}$ are obtained for the parameter $f_{\mathcal{F}_{2,2}}$ .	ameter, 1/2, :lei with
Card 1/2	

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density of single nucleon states near the Fermi level. The results agree with data obtained on low-lying resonances. The general pattern of the relationship a(A) was found to be in accord with the theoretical curve obtained by Abdel malik and Stavinskiy. The authors thank F. I. Shapiro for his interest in their work and valuable comments. Orig. art. has: 8 formulas, 1 table, and 1 figure. [Authors]

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 004/ OTH REF: 014/

Card 2/2

L 09875-67

abstract]

### "APPROVED FOR RELEASE: 06/13/2000

### CIA-RDP86-00513R000520420013-4

L 1235/2666 APT (h)-2/EWP(g)/EWT(m)/EDS APT TC/ASD/SSD Pu-4 WW/ND/ JG ACCESSION NR: AP3005219 8/0089/63/015/002/0120/0126

AUTHOR: Kapchigashev, S. P.; Popov, Yu. P.

TITLE: Capture cross sections of neutrons with energies up to 50 kev by certain construction materials

SOURCE: Atomnaya energiya, v. 15, no. 2, 1965, 120-126

TOPIC TAGS: capture cross section, neutron slowing down, nickel, copper, molybdenum, tungsten, neutron spectrometer, resonance, proportional counter, fast neutron, thermal neutron, neutron capture, reactor design, construction material, lead

ABSTRACT: The effective capture cross sections of neutrons with energies up to 50 kev were measured in nickel, copper, molybdenum, and tungsten by means of a neutron spectrometer based on the neutron slowing-down time in lead. The operating principle of the spectrometer and the measuring method have been descrited previously (Yu. P. Popov and F. L. Shapiro. Zh. eksperim. 1 teor. fiz., v. 42, 988 (1962); N. T. Kashukeyev, Yu. P. Popov, and F. L. Shapiro. Sb. Reytronraya fizika. M., Gosatomizdat, 1961, p. 354; Yu. P. Popov and F. L. Shapiro. Zh.

Card 1/43

L 17307-63 ACCESSION NR: AP3005219

3

eksperim. 1 teor. fiz., v. 40, 1610 (1961)). The dependence of an effective neutron capture cross section on energy for nickel and copper is shown in Fig. 1 of the Enclosure. Nickel specimens were made of various types of metallic nickel and nickel oxide? The results indicate that for nickel at energies from about 1.5 kev to 0.8 ev, the capture cross section dependence is in accordance with the 1/v law. The small peak at E \( \pi \) 150 ev is possibly due to the presence of cobalt in the nickel. The deviation of the capture cross section in copper from the 1/v law at E > 150 ev indicates the presence of resonance with negative-level energy in one of the copper isotopes. The energy dependence of the neutron capture cross section in molybdenum was studied for six specimens of various thickness and five different types of metal. The different thicknesses of specimens made it possible to determine the effect of self-shielding and to demonstrate that this effect is absent at E > 1 kev. The use of different types of molybdenum indicated that low peaks on the cross-section curve (Fig. 2 of Enclosure) are due to impurities. For example, the presence of about 0.35% tungsten contributed 1.2 barn to the resonant integral of neutron capture in molybdenum. The capture cross sections in tungsten were measured with five specimens of various thicknesses and three different types of metal. The results

Card 2/63

ACCESSION NR: AP3005219

for tungsten are shown in Fig. 3 of Enclosure. "The authors express their deep appreciation to F. L. Shapiro for continuous attention to the paper and his valuable advice and to Yu. Ya. Stavisskiy for his assistance. The authors also acknowledge V. A. Konks and S. A. Romanov for their help with the measurements, and Yu. A. Bultriyenko, S. N. Gubesnov, A. M. Klabukov, and Ye. D. Bulatov for assuring the normal operation of the spectrometer. The authors are also grateful to V. S. Zolotarev and his associates for preparing specimens with separated isotopes." Orig. art. has: 4 figures, I table, and

ASSOCIATION: none

SUBMITTED: 230ct62

DATE ACQ: 0680p63

ENCL: 03

SUB CODE: NS, PR

NO REF SOV: 014

OTHER: 013

Card 3/63

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420013-4"

ACCESSION NR: AP4020337

8/0089/64/016/003/0256/0258

AUTHOR: Kapchigashev, S. P.; Popov, Yu. P.

TITLE: Cross section of capture of neutrons with energy up to 50 kev. by Cr.

- Cr sup 50, Cr sup 52, Cr sup 53 muclei

SOURCE: Atomnaya energiya, v. 16, no. 3, 1964, 256-258

TOPIC TAGS: neutron capture cross section, Cr nucleus, Cr sup 50 nucleus, Cr sup 52 nucleus, Cr sup 53 nucleus, chromium isotope, neutron, Cr

ABSTRACT: Curves for the energy dependence of neutron radiation capture cross sections with energies up to 50 kev. are shown by the natural mixture of chromium isotopes and Cr50, Cr52, Cr53 isotopes measured in a spectrometer with respect to moderation time of the neutrons in lead. Measurements with specimens of varied thickness of the natural mixture indicate that the effect of self-shielding is absent in the entire energy range. Small quantities of the substance did not permit measurements to be conducted with separated isotopes. However, in comparing the values of a cross section for chromium isotopes with cross sectional values for the natural mixture in a range more likely for the self-shielding

Card 1/2

**APPROVED FOR RELEASE: 06/13/2000** CIA-RDP86-00513R000520420013-4"

ACCESSION NR: AP4020337

effect (E = 5 to 6 Kev.), the specimens are thin. Measurements were also conducted with the  ${\rm Cr}^{54}$  isotope but due to a very low capture cross section, it is difficult to separate the effect from the background. Therefore, only the upper limit of the resonance integral was carried out. "In conclusion, we are deeply grateful to F. L. Shapiro for his constant attention in the work and to V. S. Zolotarev and his co-workers for having given us the separated chronium isotopes". Orig. art. has: 2 tables, 1 figure.

ASSOCIATION: None

SUBMITTED: 13Aug63

DATE ACQ: 31Mar64

SUB CODE: NP

OTHER: 007

2/2 Card

> APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420013-4"

L 1924-66 EWT(m)/EPF(n)-2/EWP(t)/EWP(b) IJP(c) JD/WW/JG/DM

ACCESSION NR: AP5023775

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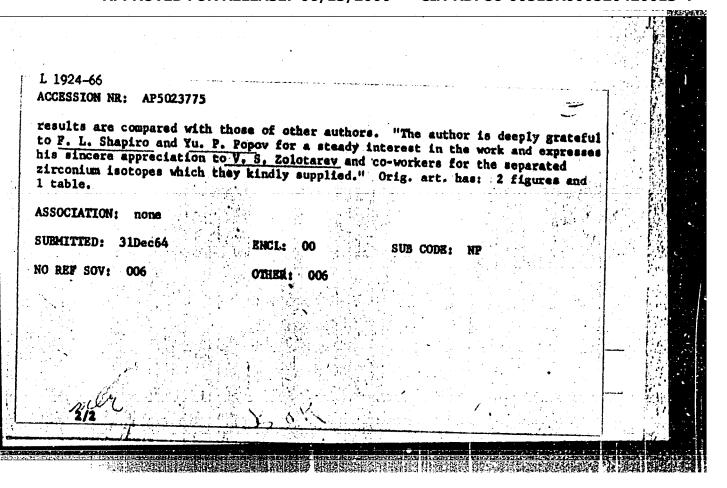
AUTHOR: Kapchigashev, S. P.

TITLE: Radiative-capture cross sections of vanadium, zirconium super 90, zirconium super 91, and zirconium super 94 nuclei for 1-50,000 av

SOURCE: Atomnaya energiya, v. 19, no. 3, 1965, 294-296

TOPIC TAGS: neutron capture, neutron cross section, vanadium, zirconium, thermal neutron, resonance absorption, capture cross section

ABSTRACT: Radiative capture cross sections were measured for vanadium, zirconium, and the separated isotopes  $Zr^{90}$ ,  $Zr^{91}$ , and  $Zr^{94}$  with a neutron spectrometer in the 1-50,000 ev range during moderation in lead. From the graphs of  $\sigma(\eta, t) = f(t)$ , the capture cross section integral is determined for any energy interval that is based on the capture cross sections of the cross section for vanadium for zirconium,  $Zr^{90}$ ,  $Zr^{91}$ , and  $Zr^{94}$ , on the resonance levels of molybdenum and tungsten. The gamma-ray detectors used were proportional and scintillation counters. The resonance absorption integrals obtained are tabulated, and the



APOSTOLOV, B.G., dotsent; KAPCHINSKAYA, T.V.

Effectiveness of prednisolone in treating toxic forms of pneumonia in very young children. Uch. zap. Stavr. gos. med. inst. 12:371-372 '63. (MIRA 17:9)

1. Kafedra detskikh bolesney (zav. dotsent B.G. Apostolov) Stavropoliskogo gosudarstvennogo meditsinskogo instituta.

# KAPCHINSKAYA, Ye.

"Geography of the Ukrainian S.S.R."; textbook for the eighth grade of the eight-year school by A.T. Dibrova. Reviewed by E. Kapchinskaia. Izv. Vses. geog. ob-va 94 no.4:357-358 Jl-Ag '62. (MIRA 15:9)

(Ukraine-Geography) (Dibreva, A.T.)

Role of Upper Neogene sediments in the formation of the recent relief as revealed by a study in Kotovsk District, Odessa Province.
Trudy Od. un. 152 Ser. geol. i geog. nauk no.8:152-158 '62.

(MIRA 17:9)

CONTRACTOR OF THE PROPERTY OF

KAPCHINSKAYA, Yefrosin'va Ivanovna. [Kapchins'ka, 1E.1.], kand. geogr. nauk; LOMAYEV, O.O. [Lomaiev, O.O.], kand. geol.-min. nauk, otv. red.; TUBOLEVA, M.V. [Tubolieva, M.V.], red.; MATVIYCHUK, O.A., tekhn. red.

[Our flourishing republic; sketch on the natural features and natural resources of the Soviet Ukraine] Nasha kvitucha respublika; narys pro pryrodu i pryrodni bahatstva Riadians'-koi Ukrainy. Kyiv, Tovarystvo "Znannia" Ukrains'koi RER, 1963. 44 p. (MIRA 16:12)

# KAPATSINSKIY, Ye.V.

Hemodynamic characteristics in patients operated on under ehteroxygen anesthesia with diprasin premedication. West, khir. 86 no.2171-74 \*61. (MIRA 14:2)

1. Is kliniki voyemno-morskoy khirurgii (nach. - prof. A.A. Bocharov) Woyemno-meditsinskoy ordena Lenina akademii im. S.M. Kirova.

(PHENOTHIARINE) (ETHYL ETHER) (BLOOD--CIRCULATION)

## KAPCHENKO L.N.

Mature of internal chloride brines. Sov.geol. 5 no.3:96-107 Mr \*62. (MIRA 15:4)

l. Lenskaya ekspeditsiya Vsesoyuznogo nauchno-issledovatel'skogo geologorazvedochnogo meftyanogo instituta.
(Brimes) (Chlorides)

KAPCHINSKIY, I.M.; KHAYKIN, S.E., redaktor; VORONIN, K.P., tekhnicheskiy

[Methods of the oscillation theory in radio engineering] Metody teorii kolebanii v radiotekhnike. Moskva, Gos. energ. isd-vo, 1954. 352 p. (MLRA 7:11)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420013-4"

24.6730

s/089/62/01/3/003/002/007 B102/B104

AUTHOR:

Kapchinskiy, I. M.

TITLE:

Achievement of maximum injection current in a strong focussing

proton synchrotron

PERIODICAL: Atomnaya energiya, v. 13, no. 3, 1962, 235-240

TEXT: Though hitherto the greatest acceleration energies attainable in protons have been 25-10 Bev, proton synchrotrons of much higher energies are now being planned and built. In line with this trend, such accelerators are being designed for the maximum attainable injection current strength by adopting a strongly focussing linear accelerator as injector. Their calculation is based on an exact solution to the problem of the Coulomb interaction between the particles in the accelerated beam, taking the final phase volume and the space charge of the beam into account. The following equations serve to determine the trajectories of the particles in the XOZ and YOZ planes:

Card 1/6

Achievement of maximum injection, ...

١,

S/089/62/013/003/002/007 B102/B104

$$\frac{d^{3}r_{x}}{d\tau^{2}} + Q_{x}(\tau) r_{x} - \frac{F_{0}^{2}}{r_{x}^{2}} - \frac{2r_{a}^{2}}{r_{x} + r_{y}} = 0;$$

$$\frac{d^{3}r_{y}}{d\tau^{2}} + Q_{y}(\tau) r_{y} - \frac{F_{0}^{2}}{r_{y}^{2}} - \frac{2r_{a}^{3}}{r_{x} + r_{y}} = 0.$$
(1)

(c.f. I. Kapchinskiy, V. Vladimirskiy, Intern. Conf. on High-energy Accelerators and Instrumentation, Geneva, CERN, 1959, p. 274). Exact numerical solutions are obtained as well as approximations. When 1 > cosμ<sub>0</sub>>0.3, the approximate solution

$$\frac{r_x(\tau) \cdot \Phi\left\{1 + q_x(\tau) \middle| R_x(\tau); \\ r_y(\tau) = \left\{1 + q_y(\tau) \middle| R_y(\tau). \right\} \right\}$$
 (5)

agrees with the exact solution to within 10%.  $\tau=z/s$ , where S is the length of a focussing period; the functions  $Q_{\chi}(\tau)$  and  $Q_{\chi}(\tau)$  depend on the external focussing fields and on the h-f accelerating field; they have a period of  $\Delta \tau=1$ . The modulation functions  $q_{\chi}$  and  $q_{\chi}$  are periodic solucard-2/6

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Achilevement of maximum injection ...

tions of the equations

$$\frac{d^2q_x}{d\tau^2} = -Q_x(\tau); \quad \frac{d^2q_y}{d\tau^2} = -Q_y(\tau) \tag{6};$$

setting  $R_x = R_v = R_K$  gives the expressions

$$R_{\rm H} = \sqrt{\frac{F_{\rm o}}{\mu_{\rm o}}} \sqrt{\sqrt{1+h^2}+h}. \tag{9}$$

$$\frac{\mu}{\mu_0} = \sqrt{1+h^2} - h.$$

(12) where

$$F_0 = \frac{s \sqrt{1-\beta^3}}{\pi \beta c} V_n; \qquad (3);$$

h is the Coulomb parameter of the beam,  $\mu$  the mean cyclic frequency of the transverse oscillations, and  $\mu_0^2 = q_{x(y)}(\tau)Q_x(\tau)d\tau$ . The concept of "transmittance" is introduced, this being the greatest possible phase volume passing per second at h = 0 for a given channel with a negligibly Card 3/6

\$/089/62/013/003/002/007 B102/B104

small space charge, as found from the equation

Achievement of maximum injection ...

$$V_{\rm H} = \frac{\pi \omega_r a^2}{V \cdot \mathbf{I} - \beta^2} \,. \tag{13}$$

When h = 0, it is given by  $V_{kh} = V_k/\sqrt{1+h^2}+h$ . The following equations are obtained when  $\mu_0 = 2\pi V$ ,  $h_{max} = 1/8MV$ ,  $R = MS/2\pi$  and  $I_{lim} = h_{max}I_a$ :

$$I_{\text{npeg}} = \left(\frac{E^2}{E_0^2} - 1\right) \frac{V_{\text{n}}}{8\pi cR} \frac{m_0 c^2}{e},$$
 (18)

$$I_{\text{Marc}} = \left(\frac{E^2}{E_0^2} - 1\right)^{3/2} \frac{A}{8R} \frac{m_0 c^2}{e}.$$
 (19)

mpeA = lim., MAKC = max., A is the chamber acceptance, E the total injection energy,  $E_0$  the rest energy and  $V_0$  the phase volume of the beam in the  $x_0 p_x/m_0$  and  $y_0 p_y/m_0$  planes. Numerical evaluation with  $E = E_0 = 100 \, \mathrm{HeV}$ ,  $A = 2.5 \, 10^{-3} \, \mathrm{cm} \cdot \mathrm{rad}$ , and  $R = 235 \, \mathrm{m}$ , gives  $I_{max} = 40 \, \mathrm{ma}$ , i.e.  $1.6 \cdot 10^{12} \, \mathrm{partical}$  Card 4/5

S/089/62/013/003/002/007 B102/B104

Achievement of maximum injection ...

cles per accelerating cycle.  $I_{lim}$  depends only on  $V_{\Pi}$  and  $V_{kh}$  and is attained when  $V_{\Pi} = V_{kh}$ . This gives the expression

$$I_{\text{MARC}} = \frac{I_8}{2V_{\Pi}} V_{R} = \frac{\mu_0 \omega_r S}{2\beta c} \left(\frac{\beta \lambda}{S}\right)^2 \left(\frac{\alpha}{\lambda}\right)^2 \frac{\beta}{(1-\beta^2)^{3/2}} \frac{m_0 c^2}{c}, \qquad (21),$$

where  $\lambda$  is the wavelength of the accelerating field in the injector. The following expression is got for the maximum ratio of aperture to focussing field frequency

 $\frac{a}{S} = \frac{eB_{\text{MaNo}} S \sqrt{1-\beta^2}}{15m_0c^2\beta \sqrt{\sin^2\frac{\mu_0}{2} + \frac{1}{2}\gamma_a}}.$  (24),

where  $B_{max}^{\dagger}$  is the maximum induction. When  $\lambda$  increases, the aperture of the channel and  $I_{max}$  increase  $\alpha\lambda^2$ , since  $S/\beta\lambda$  = const. Numerical evaluation with  $\cos\varphi_s$  = 0.8 ( $\varphi_s$  - synchronous phase),  $\cos\mu_0$  = 0.6,  $S/\beta\lambda$  = 2, Card 5/6

Card 6/6

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PLOTNIKOV, V.K.; Prinimal uchastiye; KAPCHINSKIY, I.M.

Selecting the shape of poles of quadrupole lenses. Prib. i tekh.
eksp. 7 no.2:29-33 Mr-Ap '62. (MIRA 15:5)

1. Institut teoreticheskoy i eksperimental'noy fiziki AN SSSR.

(Particle accelerators) (Electron optics)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420013-4"

## "APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000520420013-4

L 02005-67 EWT(m)/EWP(1) IJP(c)

ACC NR: AM6023761

Monograph

/ UR

Kapchinskiy, Il'ya Mikhaylovich

Dynamics of particles in linear resonance accelerators (Dinamika chastits v lineynykh rezonansnykh uskoritelyakh) Moscow, Atomizdat, 66. 0309 p. illus., biblio. 2,450 copies printed.

TOPIC TAGS: linear accelerator, electron accelerator, particle accelerator, ion beam focusing, particle beam, particle motion

PURPOSE AND COVERAGE: The book is devoted to a study of the motion of particles in linear resonance accelerators in which the particles are accelerated by high frequency traveling wave fields. The particle beam is separated by the field into bunches whose frequency equals the accelerating voltage frequency. From the point of view of particle dynamics, linear resonance accelerators can be divided into two types: in the first type (for heavy particles and low energy electrons) the phase velocity of the equivalent traveling wave is less than the speed of light; in the second type (for high energy electrons) it equals the speed of light. The motion of particles in the accelerating and focusing fields is coupled with the action of the inherent field of the beam and with the disordered spread of the particle thermal velocities determined by the phase volume of the beam. The theory of intense beams with consideration of both the finite phase volume and the finite current of the beam is developed by the author. The book is intended not only for specialists in accelerator technology but also for those interested in the problems of high intensity beam formation in other

Cord 1/2

VDC: 531.3+539.12+621.384.62

#### L 02005-67

#### ACC NR: AM6023761

technical areas. The author thanks D. G. Koshkarev and V. K. Plotnikov for valuable discussions and B. I. Bondarev and K. I. Guseva for compiling the synopsis of lectures forming the basis of the book.

TABLE OF CONTENTS /abridged/:

#### Introduction - - 3

- Ch. 1. Longitudinal oscillations of particles in beams with negligibly small space charge density - - 7
- Ch. 2. Transverse oscillations of particles in beams with negligibly small space charge density - - 54
- Ch. 3. Transverse oscillations of particles in beams with large space charge density - - 176
- Ch. 4. Longitudinal oscillations of particles in beams with large space charge density - - 263

Bibliography - - 305

SUB CODE: 20/ SUBM DATE: O6Dec65/ ORIG REF: O6O/ OTH REF: 072

# Electron beams) KAPCHINSKIY, I.M. Defocusing of a beam of charged particles. Radiotekh. i elektron. 8 no.6:985-990 Je '63. (MIRA 16:7) (Electron beams)

	AP3002712		) <b>-</b> L	
AUTHOR: Kapch		3/0120/63/000/00	3/0015/0019	
	inskiy, I. H., Plotnikov, V. K	<del></del>	60	
TITLE: <u>Magnetic</u> 1. Lens requires	<u>quadrupole lenses</u> for drift- ments and selection of pole-pi	tube type <u>linear accel</u> ece shape	erators.19 ·	
SOURCE: Pribor	🕶 i tekhnika eksperimenta, no	3, 1963, 15-19		
TOPIC TAGS: mag	metic quadrupole lens, linear	accelerator		
quadrupole lense imposed on the tube outside dia the number of fo	coblem of tolerable nonlinearies is studied theoretically. Leshape of pole pieces by the sumeter to the aperture diameter cousing periods the toler	imitations are consider mall value of ratio of r. The authors find the able field deviation for	the drift- at: (1) with	
the edge of the	beam-occupied region, is At tubes is associated with the	$\frac{\Delta H/H}{\simeq} 45/\tau\% \qquad ; (2) $	the smallest	
size of the drif				1
should be so pro	portioned that the coefficien xpansion is zero. The flat-po	t at the 5-th harmonic	of the	
should be so pro	portioned that the coefficien	t at the 5-th harmonic	of the	
should be so pro	portioned that the coefficien	t at the 5-th harmonic	of the	

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and yield greater (as compared with the hyperbolic-pole lenses) maximum gradients because the working flux is smaller and the saturation occurs at stronger fields. Orig. art. has: 4 figures and 22 formulas.

ASSOCIATION: Institut teoreticheskoy i exsperimental noy fiziki (Institute of the Theoretical and Experimental Physics)

SUBMITTED: 16Jul62 DATE ACQ: 12Jul62 ENCL: CO

SUB CODE: NS, SD NO REF SOV: 002 OTHER: 001

L 58915-65 EWT(m)/EPA(w)-2/EWA(m)-2 Pt-7 IJP(c) GS

ACCESSION NR: AT5007935

5/0000/64/000/000/0468/0470 ~

AUTHOP Kul'man, V. G.; Chistoy, V. B.; Kapchinskiy, I. M.

TITLE: Designing very long resonators for a linear proton accelerator with drift cubes

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963. Trudy. Moscow, Atomizdat, 1964, 468-470

TOPIC TAGS: high energy proton accelerator, linear accelerator

ABSTRACT: The resonators of a 100-Mev linear accelerator-injector were designed on the Lasis of experimental and computed data. (I. M. Kapchinskiy, et al., present conference, p. 462.) The present report discusses this data. The geometric dimension in adjusting the sections to the same resonance frequency with an accuracy the order of 10.1% were found from empirical formulas based on a model of a half-nection with movable bottom and changeable drift half-tubes. The lengths of the drift tubes were calculated on the basis of the potential distribution in the gaps. Calculations based on the theoretical work of Y. G. Andreyev (NT-3161-40, Radiotekhnicheskiy institut AH SSSR, K. 1961) showed that the influence of the difference

Card 1/5

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between the electrostatic and electromagnetic field distributions on the coefficient of flight time is very small up to the last accelerating gaps. This conclusion is verified also by a comparison of the fields measured in an electrolytic tank and in a high-frequency model of a section. The above-mentioned empirical formulas did not take into consideration the influence of the drift tubes' rods (diameter 60-70 mm) and the bellows (diameter 100 mm, height about 100 mm), which are installed at the base of the rods for mechanical uncoupling with the resonator and with projections inside the resonator. Therefore, after experimental determination of the influence of these design elements on the resonance frequency, the diameters of the resonaturs were corrected and finally found to equal, respectively, 132.4, 122, and 108.7 cm. The variation of the resonance frequency of the sections along the resonator was determined with rods and bellows present. An especially strong variation at the frequency is caused by the bellows in the first part of resubator I for a ergit of 3-3 m. In order to avoid a large field discortionity, their influence and additionally compensated for by selecting suitable volumes for the connection pages of the adjustment hatches, which are situated in this part of the resonators. After preparation of the resonators it was necessary to select the number of plates for field equalization with accuracy of the order of 13%. A small number of plates cannot ensure the required accuracy of the field distribution, but a too large tumber of plates leads to design complications. With this in mind, a theoretical study

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was conducted which was based on the employment of the relation between the number of plates and the number of spatial field harmonics compensating for them. This study permitted a thorough evaluation of the accuration of the field equalization AE/ i as a function of the number of plates. This dependence has the form

$$\left|\frac{\Delta E}{E}\right| < \frac{32}{\pi} \left(\frac{L}{k}\right)^2 P_{\text{max}} \cdot A(m, \kappa),$$

where L/A-ratio of the resonator length to wavelength, P greatest expected relative variation in the "local" frequency which is caused by errors in manufacture and in disregarded deviations from the form of the resonators, A-coefficient depending upon the number of drift tubes M and the number of adjustment plates m. A numerical evaluation showed that for a field equalization with accuracy of 134 in resonators I, II, and III the number of plates should be of the order of 70, 45, and 30 respectively. The above derived formula gives an enhanced number of plates. Experiments on the field equalization of resonator models showed that a smaller number of plates could be selected. On the basis of this and considerations of design convenience regarding the plate positions, the total number of plates was reduced to 50, 44, and 34 respectively in resonators I, II, and III. All plates have

Card 3/5

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the same dimensions (0.5x0.5 m), and their movement ensures a variation in resonance frequency of the order of 1%. For the sake of automatic build-up of the resonance frequency uniformly along the resonators, plates 200x400 mm in size were installed in the number 12, 12, and 10 in the resonators I, II, and III, respectively. They move simultaneously and automatically, and can vary the resonance frequency in the limits \*2.10-5. Their number was selected from the consideration that the greatest spatial field harmonic arising during operation should exert practically by in the erro on the field. For regulation of the field gradiers in the lamine of lamage, at the end of each resonator a plate 0.45x0.45 m in size and with clay of tip (m) easy costabled. The plates are controlled remotely. In order to verify the correctcess or the selection of the main data for the resonators, models of resonators I and III on the approximate scale of 1:4 were built and investigated. The tiel was ther madily adjusted with an accuracy of 3-4% with the second of the second The final dimensioned close to the cylindrical wall of the resonator diminishas along the length. There is a considerable scatter of the experimentally obtained prints, which is clarified by the errors in measurement and in the nonuniformity of The magnetic field. Experiments clarified how the field distribution varied during the operation of the plates for the regulation of the field gradient. Field distortimes did not exceed it and had the character of a "gradient." The electric field

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istribution in the models was	s measured by the method of 4-5 mm in frameter - rig	perturbation art is	with the	+{d
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ACCESSION NR: AP4041008 8/0120/64/000/003/0026/0031AUTHOR: Kapchinskiy, I. M.: Kronrod, A. S.

TITLE: Effect of the space charge on the phase oscillations of particles in an ionic linear accelerator

SOURGE: Pribory\* i tekhnika eksperimenta, no. 3, 1964, 26-31

TOPIC TAGS: ionic accelerator, linear accelerator, strong focusing accelerator, space charge effect

ABSTRACT: An integral equation is developed for the potential of a self-consistent Coulomb field of a beam:  $e^{\bullet}(\phi) = F(\phi) + h \int_{0}^{\infty} R(\phi, a) \sqrt{1 - \Phi(a)} da,$ where  $\phi$  is the particle phase, k is a dimensionless auxiliary parameter for

where  $\phi$  is the particle phase, k is a dimensionless auxiliary parameter for numerical solution,  $\epsilon = eH_0 \psi p_0 v_0 \Omega_0^2$ . This equation, valid for any relation between the longitudinal and cross dimensions of clusters, is numerically solved with these boundary conditions:

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$$\frac{d\Phi}{d\phi}(\phi_0) = 0; \quad \frac{\Phi\phi}{d\phi}(\phi_0) < 0. \qquad \quad \Phi(\phi_0) = 1; \quad \Phi(\phi_n) = 1.$$

The effect of the maximum cluster current upon the phase-stability region, phase-oscillation frequency, mean cluster current, and other parameters is evaluated. A phase-density distribution is considered when the clusters do not puisate. The beam current limitation due to longitudinal disgregation is compared with that due to cross disgregation in a strong-focusing accelerator. It is found that the effect of the space charge upon the phase-stability region is weaker than in the case when the cluster is approximated by a uniformly charged ellipsoid. Orig. art. has: 7 figures and 25 formulas.

ASSOCIATION: Institut teoreticheskoy i eksperimental noy fisiki GKAE

(Institute of Theoretical and Experimental Physics, GKAE)

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#### CIA-RDP86-00513R000520420013-4

L 4228-66 EAT(m)/EPA(w)-2/EWA(m)-2 IJP(c) GS

ACCESSION NR: AT5007962

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AUTHOR: Kapchinskiy, I. H.; Kronrod, A. S.

TITLE: Influence of space charge upon phase oscillations of particles in the n

linear ion accelerator 19

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963.

Trudy. Moscow, Atomizdat, 1964, 906-911

TOPIC TAGS: high energy accelerator, ion acceleration, focusing accelerator

ABSTRACT: The application of rigid focusing in linear accelerators with wavelength of the high-frequency field  $\lambda=1.5-2$  meters has created real possibilities for forming proton beams with intensities up to 100 milliamperes per pulse with comparatively small expenditures of power upon focusing. The planning of such accelerators must take into consideration the longitudinal forces of electrostatic repulsion, which lead to deterioration of the conditions of autophasing. The influence of the bunches' own space charge upon the phase oscillations of the particles in linear accelerators has already been studied under the assumption that each bunch represents a uniformly charged ellipsoid (Akhiyezer, A. I.; Lyubarskiy, G.

Card 1/3

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ACCESSION NR: AT5007962

Ya., et al., Teoriya i raschet lineynykh uskoriteley [Theory and Design of Linear Accelerators]. Moscow, Gosatomizdat 1962, p. 114; Vlasov, A. D., Nauchn. trudy RAI AN SSSR [Scientific Works of Radiophysics Apparatus Institute, Academy of Sciences SSSR], 2, n. 4, 27 (1960)). It remained unclear how well such an assumption approximates the self-consistent distribution of the charge in the bunch and whether the relations obtained under this assumption corresponds to the actual behavior of the bunches. The solution for the self-consistent longitudinal field of a beam accelerated in a ring machine under the assumption that the length of each bunch exceeds considerably its tranverse size was obtained earlier (Nilsen, Sessler. Rev. Sci. Instrum. 30, 80 (1959)). In the initial part, however, of the accelerator (where the influence of the spatial charge is especially considerable) the longitudinal and transverse dimensions of the bunches are commensurable and the simplifying assumption made in the work (Nilsen, cit.) is poorly fulfilled. In the present work the authors have obtained an integral equation for the potential of the self-consistent Coulomb field of the beam, such that the equation is correct for any ratios of the longitudinal and transverse dimensions of the bunches. The work shows that the influence of the spatial charge upon the magnitude of the region of phase stability is considerably weaker than in the case where the bunch is approximated by a uniformly charged ellipsoid. The authors derive the fundament-

Card 2/3

## "APPROVED FOR RELEASE: 06/13/2000

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ACCESSION NR: AT5007962

al equations, which are strongly nonlinear, obtain the numerical solution of the integral equation, and discuss the results of the numerical solution in graphical form. Orig. art. has: 7 figures, 23 formulas.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki GKAE SSSR (Institute of Theoretical and Experimental Physics, GKAE SSSR)

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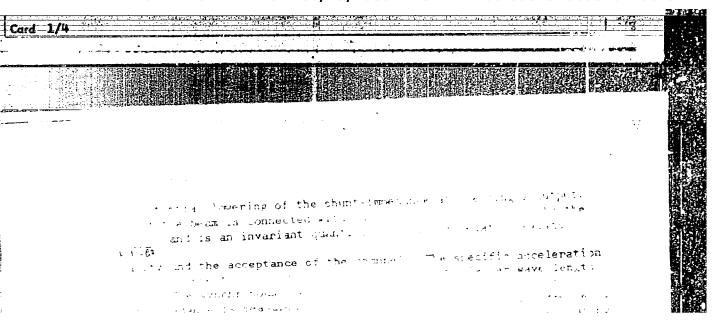
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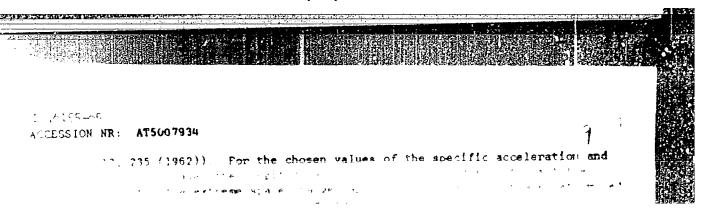
KAPCHINSKIY, I.M.; KRONROD, A.S.

Effect of a space charge on the phase oscillations of particles in a linear ion accelerator. Prib. i tekh. eksp. 9 no.3:26-31 My-Je 164 (MIRA 18:1)

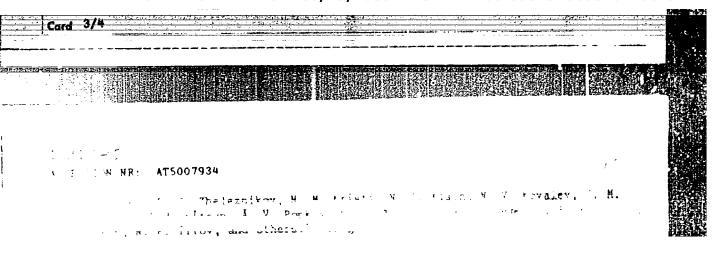
1. Institut teoreticheskoy i eksperimental noy fiziki Gosudarstvennogo komiteta po ispol'zovaniyu atomnoy energii SSSR.



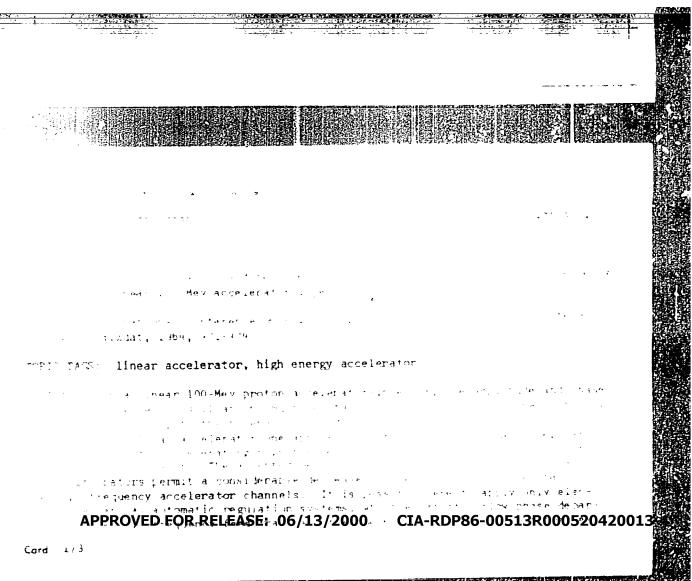
field. The shunt-impedance is measured as the quarter of the amplitude of the accelerating

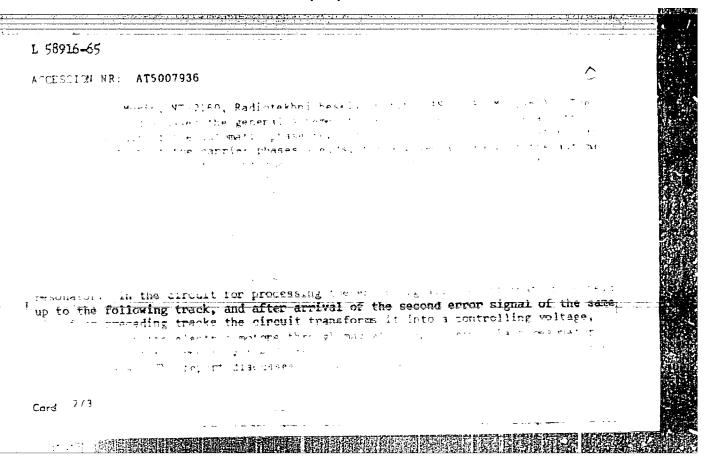


the transverse lateral repulsion (1. M. Repeninskly, A. S. Rionrod, processing the processing of the system of the system, the field drop during the 12 ages the injector was carried out under the scientific guidance of the viadual reskiy and A. L. Kints. The design was developed by the joint participation of llowing associates of the Institute of Theoretical and Experimental Physics.



ASSOCIATION: Radiotekhnicheekiy institut An SSSR (Radio Engineering Institute)





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KAPCHINSKIY, L.M.

USSR/ Electronics - Electromagnetic reception

Card 1/1

Pub. 89 - 18/30

Authors

Kapchinskiy, L.

Title

Television Antennas

Periodical:

Radio 1, 37 - 39, Jan 56

Abstract

The characteristics of a receiving antenna are explained with emphasis on the advantages of having high directional selectivity to eliminate static and shadows. Single-program, external, receiving antennas with little directional selectivity, intended for receiving signals over distances of 20 - 25 km are dealth with at length, followed by an explanation of the single-program, external, receiving antennas with great directional selectivity, intended for receiving signals over distances of 25 - 30, 30 - 40, and 50 - 70 km. Data are also given for designing antennas for reception over distances of 70 - 80 km. Drawings, graphs, and tables on unnumbered pages between pages 32 and 33.

Institution:

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Submitted

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112-57-8-17760

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1957, Mr 8, p 271 (USSR)

AUTHOR: Kapchinskiy, L. M.

TITIE: A Two-Channel Meter-Wave Cutoff Attenuator (Dvukhkanal'nyy predel'nyy attenuator metrevah volm)

PERIODICAL: Tr. Televis. fil.-labor. M-vo radiotekhn. prom-ati SSSR (Transactions of the television Branch Laboratory. Ministry of the Radio-Engineering Industry, USSR), 1956, Mr 1, pp 45-47

ABSTRACT: A two-channel meter-wave attenuator is a round cutoff waveguide energized at the same or at different frequencies by two coupling leeps fed by two independent sources. A pickup loop lying in the diametrical plane of the waveguide and movable along the waveguide axis serves as the receiving element. The running attenuation is 1 db/mm. Relative calibration of the attenuator in its linear section is practically independent of frequency within a broad frequency range. The working band of the attenuator is 50 to 70 mc. It permits inserting a

Card 1/2

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420013-4"

USSR/Electronics - Television antennas Pub. 89 - 16/33Card 1/1 Authors Kapchinskiy, L. Title Television antennas Periodical : Radio 2, 34-39, Feb 56 A comparison is made between the conditions under which an outside and an Abstract inside antenna work. These are found to be quite different. Under the reflecting effect of walls and metal parts of a building in a majority of cases the electromagnetic field inside a room is found to be a combination of horizontally and vertically polarized waves. These special factors are taken into consideration in designing inside antennas for which technical data and explanations are given. Types of antennas described are called: "telescope type," "abridged linear type," "ring type," and built-in type." Illustrations; diagrams. Institution: Submitted

SOV/112-59-1-1793

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 1, p 254 (USSR)

AUTHOR: Kapchinskiy, L. M.

TITLE: A Case of Folded-Dipole Resonance

PERIODICAL: Tr. Televizion. fil.-labor., 1956, Nr 3, pp 63-68

ABSTRACT: Bibliographic entry.

Card 1/1

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420013-4"

KAPCHINSKIY, L.M.

#### PHASE I BOOK EXPLOITATION

SOV/4401

### Zagik, Semen Yefimovich, and Lev Mikhaylovich Kapchinskiy

- Priyemnyye televisionnyye antenny (Television Receiving Antennas). 2nd ed., rev. and enl. Moscow, Gosenergoisdat, 1958. 79 p. (Series: Massovaya radiobiblioteka, vyp. 306) 100,000 copies printed.
- Ed.: F.I. Tarasov; Tech. Ed.: L.Ya. Medvedev; Editorial Board: A.I. Berg, V.A. Burlyand, V.I. Vaneyev, Ye.N. Genishta, I.S. Dzhigit, A.M. Kanayeva, E.T. Krenkel', A.A. Kulikovskiy, A.D. Smirnov, F.I. Tarasov, and V.I. Shamshur.
- PURPOSE: This booklet is intended for the amateur interested in television.
- COVERAGE: The booklet describes in an easily understandable style various types of outdoor and indoor antennas intended for the reception of one or several television programs. No personalities are mentioned. There are no references.

#### TABLE OF CONTENTS:

Ch. I. Special Features of the Reception of Television Transmissions

3

Ch. II. Parameters of Television Receiving Antennas Card 1/2

11

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ZAGIK, Semen Yefimovich; KAPCHINSKIY, Lev Mikhaylovich; IVANITSKIY, V.Yu., red.; MATVEYEV, G.I., tekhn.red.

[Coaxiel cables] Koaksial'nye kabeli. Moskva, Gos.energ.isd-vo. 1959. 39 p. (Massovaia radiobiblioteka, no.324) (MIRA 12:4 (NIRA 12:4) (Coaxial cables)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420013-4"

ZAGIK, Semen Yefimovich; KAPCHINSKIY, Lev Mikhaylovich; IVANITSKIY, V.Yu., red.; VORONIN, K.P., tekhn. red.

[Television receiving antennas] Primenye televizionnye antenny. Izd.3., perer. i dop. Moskva, Gosenergoizdat, 1962. 127 p. (Massovaia radiobiblioteka, no.386) (MIRA 15:7) (Television—Antennas)

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TITLE:

On a class of equations solved with respect to a function

PERIODICAL:

Referativnyy zhurnal, Matematika, no. 9, 1962, 25, abstract 9B132 ("Zesz. nauk. Politechn. częstochow.", 1960, no. 7, 3 - 6; Polish;

Summaries in Russian, English)

TEXT:

The paper considers an equation of the form

 $y' = xy + \varphi(x) f(y') + g(y')$ .

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By differentiating both sides, it is brought into the form

 $- f(z) u' = g'(z) + f'(z) u' + \varphi^{-}(u), \qquad (2)$ 

where z = y',  $u = \phi(x)$ ,  $\phi^-$  is the function inverse to  $\phi$ . The functions  $\phi(x)$  for which equation (2) takes the form of known equations are indicated and consequently equation (1) is solved by known methods.

From Author's summary

[Abstracter's note: Complete translation]

Card 1/1

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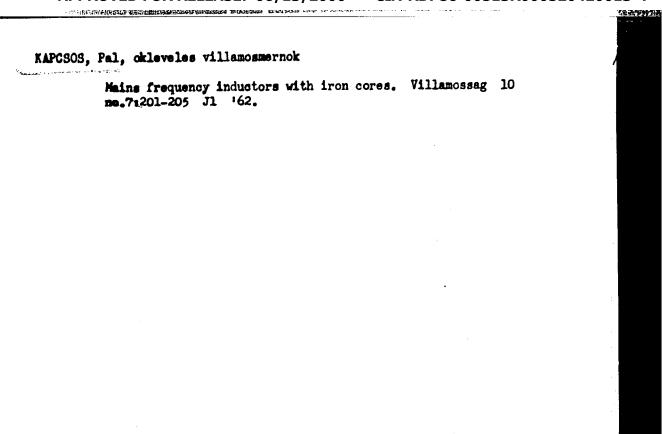
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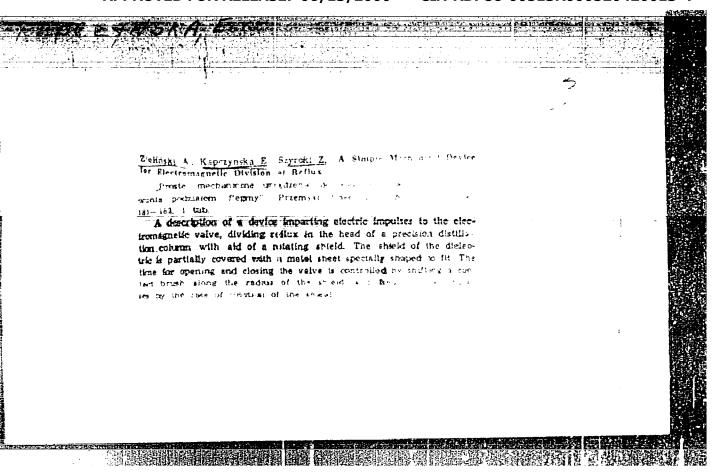
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